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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,033	05/10/2001	Guoping Zhang	12126	7868

7590

03/28/2003

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EXAMINER

FETZNER, TIFFANY A

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/852,033

Applicant(s)
Zhang, Guoping

Examiner
Tiffany Fetzner

Art Unit
2862



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 20, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Oct 12, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 2862

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

A) **Figure 11** does not show reference number 1126 taught on page 26 in line 19. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

A) **Figure 2** shows **Reference number 251, 253** that do not occur in applicant's description of Figure 2.

B) **Figure 3** shows **Reference number 392, 394** that do not occur in applicant's description of Figure 3.

C) **Figure 5** shows **Reference number 481, 410** that do not occur in applicant's description of Figure 5.

D) **Figure 8b** shows **Reference number 800** that does not occur in applicant's description of Figure 8b.

E) **Figure 11** shows **Reference number 1002 and 1004** that do not occur in applicant's description of Figure 11.

Art Unit: 2862

F) **Figure 13A** shows **Reference number 1350** that does not occur in applicant's description of Figure 13A, the examiner notes that a component 350 is referred to, if this component 350 is a typo for component 1350 applicant is asked to fix the typographical error.

G) **Figure 18B** shows **Reference number 1810** that does not occur in applicant's description of Figure 18B.

H) **Figure 19** shows **Reference number 1912** that does not occur in applicant's description of Figure 19. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects **must consist of two parts:**

- A. A separate letter to the Draftsman in accordance with M.P.E.P. (608.02(r)); and
- B. A print or pen-and-ink sketch showing changes in red ink in accordance with M.P.E.P. (608.02(v)).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketch with proposed corrections shown in red ink is required in response to this Office Action, and *may not be deferred*.

Art Unit: 2862

Specification

4. The disclosure is objected to because of the following informalities:

A) On page 13 the applicant is referencing Figure 2, however applicant states "with reference not to Figure 2," The examiner would suggest deleting the word "not", since applicant is actually referring to figure 2.

B) On page 22 paragraph 3, delete Figure 9A and insert Figure 9C since the applicant is referencing Figure 9c.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-33** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Kasten et al.**, US patent 5,317,260 issued May 31st 1994.

7. With respect to **Claim 1**, **Kasten et al.**, shows, teaches and suggests "A user interface operable to create, on a display device, a window for displaying a plurality of menu editor items for user selection" [See Figure 2, Figure 1, col. 2 line 11 through col. 9 line 35], "said menu editor items comprising: a sequence editor item for creating a pulse sequence from at least one value; and a sequence tailor editor item for user interaction with a graphical representation of a selected pulse sequence, wherein during said user interaction, the selected pulse sequence is

Art Unit: 2862

graphically displayed to the user.” [See Figure 2, Figure 1, the abstract and col. 2 line 11 through col. 9 line 35 where each of the menu items, and the parameters of each sequence that can be changed, via graphical icons (i.e. interpreted by the examiner as “editor items”) are taught]

8. With respect to **Claim 2**, **Kasten et al.**, teaches and suggests “said sequence tailor editor item is activated in response to user selection.” [See col. 3 line 9 through col. 4 line 16; col. 6 line 37 through col. 9 line 36; Figures 1, 2, and the abstract] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2**.

9. With respect to **Claim 3**, and corresponding method **claim 25**, **Kasten et al.**, teaches and suggests that “user selection of said sequence editor item activates a display of at least one sequence parameter for creating said pulse sequence, said at least one sequence parameter being operable to accept a default value.” [See col. 3 line 9 through col. 4 line 16; col. 6 line 37 through col. 9 line 36; Figures 1, 2, and the abstract] The same reasons for rejection, that apply to **claims 1, 19** also apply to **claims 3, 25**.

10. With respect to **Claim 4**, and corresponding method **claim 26**, **Kasten et al.**, teaches and suggests that “said at least one sequence parameter is operable to accept a user entered value.” [See abstract, Figures 1 and 2; col. 2 line 17 through col. 4 line 16; col. 6 line 17 through col. 9 line 36; especially col. 7 lines 55-61.] The same reasons for rejection, that apply to **claims 1, 3, 19, 25** also apply to **claims 4, 26**.

11. With respect to **Claim 5**, and corresponding method **claim 27**, **Kasten et al.**, teaches, shows, and suggests that “said at least one sequence parameter is selected from the group consisting of: a gradient resolution parameter, a radio frequency pulse resolution parameter, a

Art Unit: 2862

echo gathering time parameter, a sequence name parameter, at least one gradient motion compensation parameter, at least one radio frequency pulse characteristic parameter, and at least one data acquisition parameter.” [See Figures 1 and 2, col. 2 line 17 through col. 9 line 36 where the modifiable sequence parameters are explained in detail throughout the reference and graphically shown/suggested in Figures 1 and 2.] The same reasons for rejection, that apply to **claims 1, 3, 4, 19, 25, 26** also apply to **claims 5, 27**.

12. With respect to **Claim 6, Kasten et al.**, teaches and suggests that “acceptance, by the user interface, of the at least one sequence parameter activates said sequence tailor editor item.” [See col. 7 line 14 through col. 9 line 36.] The same reasons for rejection, that apply to **claims 1, 3** also apply to **claim 6**.

13. With respect to **Claim 7, Kasten et al.**, teaches and suggests that “activation of said sequence tailor editor item activates display of said pulse sequence and at least one control feature.”[See col. 6 line 17 through col. 7 line 4; col. 7 line 14 through col. 9 line 36; in combination with Figures 1, 2, and the abstract.] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2**.

14. With respect to **Claim 8, Kasten et al.**, teaches and suggests that “said at least one control feature comprises at least one of a control section, a shape editor, a block editor, and a time scaler.” [See col. 6 line 16 through col. 9 line 36; col. 5 line 55 through col. 6 line 5; col. 2 line 17 through col. 4 line 30] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 7** also apply to **claim 8**.

Art Unit: 2862

15. With respect to **Claim 9, Kasten et al.**, teaches and suggests that “said shape editor, when activated, is operable to modify at least one radio frequency pulse characteristic parameter and the radio frequency pulse shape associated with said selected pulse sequence.” [See col. 5 line 38 through col. 6 line 36; col. 7 line 43 through col. 9 line 36.] The same reasons for rejection, that apply to **claim 1, 7, 8** also apply to **claim 9**.

16. With respect to **Claim 10, Kasten et al.**, teaches and suggests that “said time scaler, when activated, displays at least one vertical line through the graphically displayed selected pulse sequence for assisting the user in analysis of timing relations of the pulse sequence.” [See col. 3 line 30 through col. 4 line 16; Figures 1, 2 col. 6 lines 12-16; col. 6 line 24 through col. 7 line 61] The same reasons for rejection, that apply to **claim 1, 7, 8** also apply to **claim 10**.

17. With respect to **Claim 11**, and corresponding method **claim 22, Kasten et al.**, teaches, shows and suggests that “said graphical representation within said window on said display device is divided into a plurality of portions.” [See Figure 2; Figure 1; col. 2 line 17 through col. 9 line 16] The same reasons for rejection, that apply to **claims 1, 19** also apply to **claims 11, 22**.

18. With respect to **Claim 12**, and corresponding method **claim 23, Kasten et al.**, teaches, shows and suggests that “said plurality of portions comprises at least one of a radio frequency pulse characteristics graph, a slice select gradient graph, a signal acquisition graph, and a phase encoding graph.” [See Figure 2; col. 7 line 14 through col. 9 line 36] The same reasons for rejection, that apply to **claims 1, 11, 19, 22** also apply to **claims 12, 23**.

19. With respect to **Claim 13**, and corresponding method **claim 20, Kasten et al.**, teaches and suggests that “said menu editor items within said window further comprise a scan setting

Art Unit: 2862

menu editor item for initiation of a magnetic resonance imaging scan.” [See col. 3 line 9 through col. 4 line 20, where the ability to start a scan, or command from a control signal represented by one of the graphic image symbols, is taught] The same reasons for rejection, that apply to **claims 1, 19** also apply to **claims 13, 20**.

20. With respect to **Claim 14**, **Kasten et al.**, teaches, shows and suggests that “selection of said scan setting menu editor item displays at least one type of scan to perform.” [See Figure 2; col. 1 lines 6-29; col. 6 line 50 through col. 9 line 36; menu strip 56] The same reasons for rejection, that apply to **claims 1, 13** also apply to **claim 14**.

21. With respect to **Claim 15**, and corresponding method **claim 21**, **Kasten et al.**, teaches and suggests that “said at least one type of scan comprises at least one scan selected from the group consisting of: a two dimensional scan, a combination scan, a three dimensional scan, a three dimensional combination scan, a two dimensional fast spin echo scan, and combinations thereof.” [See Figure 2 col. 6 line 50 through col. 9 line 36; abstract] The same reasons for rejection, that apply to **claims 1, 13, 14, 19, 20**, also apply to **claims 15, 21**.

22. With respect to **Claim 16**, **Kasten et al.**, teaches and suggests that “said type of scan, when activated, displays at least one setting imaging parameter, said setting imaging parameter being operable to accept at least one default value.” [See abstract, col. 2 line 17 through col. 9 line 36; because the ability to achieve this limitation is taught for multiple parameters throughout the reference.] The same reasons for rejection, that apply to **claims 1, 13, 14** also apply to **claim 16**.

Art Unit: 2862

23. With respect to **Claim 17, Kasten et al.**, teaches and suggests that “said at least one setting imaging parameter is operable to accept at least one user-entered value.” [See col. 7 lines 48-51; col. 6 lines 17-49; col. 2 lines 11-28; col. 1 lines 6-29; abstract] The same reasons for rejection, that apply to **claims 1, 13, 14, 16** also apply to **claim 17**.

24. With respect to **Claim 18, Kasten et al.**, teaches and suggests that “said at least one setting imaging parameter is selected from the group consisting of: a number of slices parameter, a slice thickness parameter, a sequence repetition parameter, a number of phase encoding levels parameter, a discrete Fourier transform size parameter, a polarity flipping parameter, and combinations thereof.” [See Figures 1, 2; col. 5 line 38 through col. 9 line 36] The same reasons for rejection, that apply to **claims 1, 13, 14, 16** also apply to **claim 18**.

25. With respect to **Claim 19**, which is the corresponding method version of **claim 1, Kasten et al.**, teaches, shows and suggests “A method for creation and customization of pulse sequences. said method comprising the steps of: creating a window on a display device for displaying a plurality of menu editor items for user selection;” [See col. 2 lines 24-28; Figure 2;] “displaying a sequence editor item for creating a pulse sequence from at least one of user-entered values and default values;” [See col. 3 line 18 through col. 4 line 20; col. 6 line 36 through col. 7 line 42] “displaying a sequence tailor editor item for user interaction with a graphical representation of a selected pulse sequence” [See col. 6 line 36 through col. 7 line 33 through col. 9 line 36], “and displaying, graphically, said pulse sequence to the user.” [See Figures, 1, 2, the abstract, col. 1 lines 6-29; and col. 2 line 17 through col. 9 line 36]. The same reasons for rejection, that apply to **claim 1** also apply to **claim 19**.

Art Unit: 2862

26. With respect to **Claim 24, Kasten et al.**, teaches and suggests that “said method further comprising the steps of: Initiating a magnetic resonance imaging scan by activating a scan setting menu editor item within said window on said display device” [See col. 3 line 9 through col. 4 line 20, where the ability to start a scan, or command from a control signal represented by one of the graphic image symbols, is taught; and col. 7 line 5 through col. 9 line 36]; “and displaying at least one setting imaging parameter.” [See Figure 2; col. 2 lines 17-34; col. 3 lines 48-57] The same reasons for rejection, that apply to **claims 1, 19** also apply to **claim 24**.

27. With respect to **Claim 28, Kasten et al.**, teaches and suggests that “said method further comprising the step of: activating said sequence tailor editor item by at least one of user selection and a response to said step of accepting of said at least one sequence parameter by a user interface.” [See col. 5 line 38 through col. 9 line 36; col. 3 line 9 through col. 4 line 20; col. 2 lines 17-39; col. 1 lines 6-29; Figures 1, 2, and the abstract.] The same reasons for rejection, that apply to **claims 1, 19, 25, 26** also apply to **claim 28**.

28. With respect to **Claim 29, Kasten et al.**, teaches and suggests that “said method further comprising the step of: displaying the selected one of said pulse sequences and at least one control feature for at least one of plot modification and plot enhancement.” [See abstract, col. 2 lines 40-53; col. 4 lines 26-29; col. 3 line 46 through col. 4 line 16; col. 7 lines 43-61] The same reasons for rejection, that apply to **claims 1, 19, 25, 26, 28** also apply to **claim 29**.

29. With respect to **Claim 30, Kasten et al.**, teaches and suggests that “said step of displaying further comprises the step of: displaying at least one of a control section, a shape editor, a block editor, and a time scaler.” [See Figures 1, 2, abstract, col. 5 line 38 through col. 9

Art Unit: 2862

line 36; col. 1 lines 6-29; col. 2 line 9 through col. 4 line 20] The same reasons for rejection, that apply to **claims 1, 19, 25, 26, 28, 29** also apply to **claim 30**.

30. With respect to **Claim 31, Kasten et al.**, teaches and suggests that “said step of displaying at least one of a control section, a shape editor, a block editor, and a time scaler further comprises the steps of: activating said shape editor; and modifying at least one of the radio frequency pulse characteristic parameters and the radio frequency pulse shape associated with said pulse sequence.” [See col. 7 line 62 through col. 8 line 32; Figures 1, 2, col. 5 line 38 through col. 6 line 49; Abstract, col. 1 lines 6-29] The same reasons for rejection, that apply to **claims 1, 19, 25, 26, 28, 29, 30** also apply to **claim 31**.

31. With respect to **Claim 32, Kasten et al.**, teaches and suggests the steps of “activating said time scaler, and displaying at least one vertical line through the graphically displayed pulse sequence for assisting the user in analysis of timing relations of the pulse sequence.” [See col. 3 line 30 through col. 4 line 16; Figures 1, 2 col. 6 lines 12-16; col. 6 line 24 through col. 7 line 61] The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 1, 7, 8, 10, 19, 25, 26, 28, 29, 30** also apply to **claim 32**.

32. With respect to **Claim 33, Kasten et al.**, teaches, shows and suggests “displaying at least one of a number of slices parameter, a slice thickness parameter, a sequence repetition parameter, a number of phase encoding levels parameter” [See Figure 2, col. 2 line 17 through col. 7 line 9; col. 7 line 14 through col. 9 line 36] “a discrete Fourier transform size parameter, (i.e. col. 5 lines 55-61) “and a polarity flipping parameter” (i.e. a paps sequence).” [See Figure 2; col. 5 line 38

Art Unit: 2862

through col. 9 line 36] The same reasons for rejection, that apply to **claims 1, 19, 25, 26, 28, 29, 30** also apply to **claim 32**.

33. The **prior art made of record** and not relied upon is considered pertinent to applicant's disclosure.

- A) **Whayne et al.**, US patent 6,014,581 issued January 11th 2000.
- B) **Haney et al.**, US patent 4,191,919 issued March 4th 1980.
- C) **Keller et al.**, US patent 5,041,789 issued August 20th 1991.
- D) **Hoenninger, III** US patent 5,465,361 issued November 7th 1995.
- E) **Kasuboski** US patent 5,349,294 issued September 20th 1994.

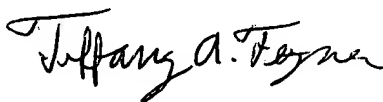
Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tiffany Fetzner** whose telephone number is **(703) 305-0430**. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.


35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Edward Lefkowitz**, can be reached on **(703) 305-4816**. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3432 .

36. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

TAF



March 17, 2003



EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
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